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ASCIT Elections

Sign-ups are up for: Tech Editor

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THE SEATTLE  
WTO PROTESTS  
TO SPEAK AT TECH

BY DEBORAH WILLIAMS-HEDGES

Michael Dolan, activist and deputy director of Public Citizen's Global Trade Watch, will be the second speaker in the California Institute of Technology's Social Activism Speaker Series on campus.

The presentation, "The Mobilization Against Globalization: Fair Trade Politics in the New Millennium," will take place on Friday, January 26, at 8 p.m. in the Beckman Institute auditorium. The event is free and open to the public.

Dolan currently serves as the deputy director of the Global Trade Watch team, which was founded by Ralph Nader in 1971. He also serves as field director of the Citizens Trade Campaign, a national coalition of labor, environmental, consumer, and family farm groups that oppose the free trade agenda characterized by the NAFTA and GATT agreements.

Dolan is a veteran organizer and activist with extensive grassroots experience throughout the country.

This is the second year for the Social Activism Speaker Series, which is aimed at providing Caltech students with opportunities to utilize and apply their scientific/technical training to help resolve societal and global issues.

The series introduces the Caltech student body, as well as the public, to people who have dedicated their lives to the improvement of society. This series is co-sponsored by the Caltech Y, the President's Office, Caltech Women's Center, Graduate Student Council, Graduate Dean, International Student Programs, Student Affairs, Avery House, and Jack and Edith Roberts.

The Social Activism Speaker Series will continue with Michelle Mascarenhas, president of the board of directors of the Community Alliance with Family Farmers, on Friday, April 20 at 8 p.m.

Stapleton and Fassler to lead ASCIT/BoC

BY JONATHAN FOSTER

There will be no recount. There wasn't really much of a threat of one, but the recent elections of an ASCIT president and vice-president/BoC were certainly more emotional than they have been in many years. Last year the field of candidates running for president was deemed to be so poor that no-one won the election, and our new president was chosen by ASCIT's Excomm. Additionally, Laura

Brogoch ran unchallenged for the post of VP/Boc Chair.

What a difference a year makes. In comparison to last years turnout of only 306, this time 510 students cast their vote.

In the words of Michael Schein, the election chair, "There was an exceptional turnout, which may have had something to do with the flurry of e-mails that circulated the morning of the election." For those few members of the Caltech body who never check their e-

mail or who missed out on the mass mailing, Schein is referring to e-mails sent out on the morning of the election by various parties about the candidates for the BoC Chair/VP race. What started as intrahouse e-mails ended up being mailed campus wide.

The tone of some of the e-mails and the accusations contained therein polarized the election. As the chart clearly shows, houses voted as a block, with Blacker, Fleming, Llyod, and Ruddock going to Joe Fassler and Dabney, Page, and Ricketts going to Jacob Zasada. Fassler emerged triumphant.

"I think the situation was regrettable, but not something that invalidates the election," said outgoing ASCIT president Eric Tuttle. "In any election there's going to be rumors and stuff...



Current ASCIT President Eric Tuttle calls Martha-Helene Stapleton to congratulate her on her victory.

but people are free to express their opinions as long as they don't violate the bylaws."

The election for ASCIT president was somewhat less contentious, but the votes were once again strongly along house lines, with Martha-Helene Stapleton winning after a redistribution of votes (those results are in full on page 2). The ASCIT bylaws stipulate that the new officers will take over at the second BoD meeting following the election.

Caltech and MIT plan to redesign US voting system

BY WILLIAM FONG

After the turmoil encountered in the past presidential election in Florida, the presidents of Caltech and MIT announced in early December a partnership between the two institutions that would attempt to create a more reliable and efficient voting system for the next presidential election in 2004. The Caltech team comprises of: Thomas Palfrey, professor of political science; Michael Alvarez, associate professor of political science; Jehoshua Bruck, professor of CNS and electrical engineering; and Erik Antonsson, professor of mechanical engineering. The MIT team includes: Steve Ansolobehere, professor of political science; Charles Stewart, professor of political science; Ronald Rivest, professor of electrical engineering and computer science, and Nicholas Negroponte, the director of the MIT Media Laboratory.

With the project barely under way, the two sides have met and established the preliminary goals and objectives of this project. Right now, the project is in its first phase which is a six-month long study of the voting systems used in the past twenty

years (1980 to present). Not only are voting systems being identified, the study is also attempting to determine the undervote and overvote tendencies of each system. The difficulty involved in gathering these statistics results from the fact that most of the miscounts in votes are the direct product of human error or confusion. Another foreseen problem is determining the difference between an undervote or overvote from those that were intentionally left blank or intentionally all filled in. These inconsistencies add to the uncertainty in the rates of undervotes and overvotes of a particular system.

While Caltech and MIT are conducting their comprehensive study, action is being taken in Congress and the state legislatures to reform the current voting system. The California state legislature has already introduced a bill that would provide 3:1 matching state funds to counties to facilitate upgrading and modernization of their current voting mechanisms. Congress plans on introducing a similar bill that would also allocate funds for counties to take measures to ensure a more efficient election procedure in the

future.

Although the funding is sure to get some counties to commit to modern technology, the chances for complete modernization is highly unlikely, says Professor Palfrey. "Although we will probably see the end of punch cards, it is very unlikely that in the next five years a uniform voting system will be in place." When asked about the possibility of an electronic voting system or internet voting, Palfrey brought up the issue of absentee voting, which would obviously require the use of some other form of voting like a paper ballot. With regards to the realities of internet voting, Palfrey said that the concerns of security and fraud will have to be addressed before moving ahead with its development.

After this initial study, the re-

sults will be analyzed to determine whether the entire system will have to be changed or if certain voting methods are reliable enough to be used in the future. As to the probable outcome, Palfrey suggests that it will most likely result in the assimilation of the good qualities of our current voting systems, the establishment of uniform standards, and, if it is deemed necessary, a new voting system will be developed.

When asked to share his opinions about the realization of a uniform voting system in the United States in the future, Palfrey replied with a counterexample: "I'm pretty sure that there will be a rural county somewhere in this country that will still be using paper ballots regardless of what technology is available."

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# Letters and Yoghurt

## LETTERS TO THE EDITOR

### A request for civility

Q: Where does one find dual air bags? A: At a political debate. —Johnny Hart

Unfortunately, the air bags that Hart refers to may not necessarily be the candidates themselves.

Thanks to Ali Hassani, most of the undergraduates in the Caltech community know of the scathing remarks that Kenneth Higa (Ruddock BoC rep), Aaron Robison (BoC rep at large), and William Findley (Lloyd BoC rep) made concerning Jacob Zasada (Ricketts BoC rep who was running for the BoC chair). I am not alone in thinking that

Ali should have chosen a different way of expressing himself—he received fifty emails from people telling him that he was “childish” or that “the instant [Ali] left all diplomatic reserve behind and insulted William, [Ali] lost all credibility for [himself] and Zasada.”

However, I can sympathize with Ali. It is often very difficult to stand up for what you believe in when your opponents carry so much clout.

How is a freshman supposed to feel like anything other than David facing Goliath when facing three representatives of one of the most hallowed, respected, and feared bodies at this school? These three representatives changed voters minds, as people

admitted to “reading Kenny’s email and just doing what he said to do.”

I know that Ali voiced his concern to most of campus, while Kenny, Aaron, and Will voiced their opinions to houses which they were members of. Ali got berated for this, but I know people in Ruddock who would rather hear Ali’s words than Kenny and Aaron’s and people in Lloyd who didn’t want Will to tell them who to vote for.

The election for the BoC chair should be a bet on the future for the Caltech community, not a popularity test of the past for your house. For these reasons, I urge campaign reform for future elections—if not by an actual bylaw change, then by the honor and civility of all those participating in the elections.

People in positions of power

and influence like Aaron and Kenny should not delude themselves into thinking they are “faithful BoC reps” making a “public service announcement” to vote against a candidate. Members of the BoC like Will shouldn’t write 3,000 word pieces of character assassination based mostly on unsubstantiated opinion. People like Ali should not feel so overwhelmed by these people as to spam all of campus.

I believe that Kenny, Aaron, Will and Ali all did a great disservice to both Joe Fassler and Jacob Zasada by having to get their two cents in when it was a race between Joe and Jacob. Let us leave the campaigning and debating to the candidates!

Respectfully,

Richard Karnesky

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The editors reserve the right to edit or refuse to print any letter for any reason.

# Yoghurt

by Guglielmo and Fiordiligi

For those of you that are not actively following the opera circuit (and let’s be honest, that’s most of us) we’re here to inform you this week of the performances of arguably one of Mozart’s finest, though commercially unsuccessful, operas *Le nozze di Figaro*. That’s the *Marriage of Figaro* for those of you that don’t speak Italian. This is a great show, worth the price of the ticket simply to hear the overture. While it’s well recognized and famous, it’s nice to hear each and every time, and along with your ticket to see the overture, they throw in the rest of the opera as well.

The opera itself as it is presented is very well done. The sets are beautiful and the most elaborate since last season’s *La Rondine*. For those of you who have never really had the chance to see or experience opera it’s an excellent show to start with.

The plot line of the opera is one where you really don’t want to know details. The main story is that it’s always fun to see bad things happen to bad people. As a result we have the scandalous Count Almaviva who is married to the countess. His servant Figaro is going to marry his wife’s maid Susanna; however, the Count has lusted after the young maid for so long that he is considering bringing back the medieval law of *prima nocta* (first night) that had been banished for so long for Susanna alone. Through a series of plans that are often improvised Figaro tries to find way to get around the Count’s power. Really, it’s much funnier than it sounds and will satisfy all of your desires for burlesque humor.

The casting for this opera is excellent. Richard Bernstein as Figaro is excellent in this role as he has made it his signature. So-

prano Maria Bayo debuts in Los Angeles as Susanna and proves that all of the accolades heaped upon her were well deserved. She also helps to dispel the image of female opera leads being large and fat. Bernstein and Bayo both had rich, clear voices with excellent tone and made the most of every comic moment. Megan Dey-Tóth as Cherubino is a delight to watch and for those of you slightly confused by the gender, she is playing a man. A male voice that can reach in the range the role demands is very rare nowadays. Also, the orchestration is very neat and involves the use of a harpsichord.

If you want to understand more of the opera before it begins consider listening to or at least getting an detailed synopsis of Rossini’s *Il barbiere di Siviglia* (*The Barber of Seville*) which is based on the first play of the trilogy by Pierre Augustin Caron de Beaumarchais; *Le nozze di Figaro* is based on the second.

Reading the LA Times review you would think that the major problem with *Le nozze di Figaro* would be the fact that you couldn’t hear the singers. Fortunately, student rush tickets often get you better seats than the poor LA Times critics. Tickets are \$20 for the best seats they have, we recommend trying to split up if it can get you better seats, Founder’s Circle tickets are well worth the hassle. Show up an hour beforehand to get the student/senior rush tickets when they start to go on sale and then go in for the preconcert lecture by Alan Chapman. Finally, don’t worry if you don’t speak Italian, neither do we, but we can read the English translations projected above the stage to know what’s going on.

## ASCIT Election results: the numbers for all you crazy math-science types

Contributed by Mike Schein, Election Chair

After all the first-rank votes were counted, the race for President remained very close:

	Heffner	Karhson	Stapleton	NO	W	Abs	Total
Blackcr	5	6	40	18	0	5	69
Dabney	0	38	20	2	2	1	62
Fleming	46	6	18	3	0	3	73
Lloyd	29	9	25	23	0	6	86
Page	36	8	4	7	2	1	57
Ricketts	0	68	2	5	0	7	75
Ruddock	13	3	34	5	0	10	55
Total	129	138	143	63	4		477

Write-in

Abs=Abstain

Total=Total number of correctly-cast non-abstaining ballots.

AM = absolute majority = least integer strictly greater than  $(1/2) * (\text{number of non-abstaining ballots cast}) + (1/2) * (\text{error})$ .

The NO votes were redistributed, followed by the write-ins. This still did not give any of the three candidates an absolute majority. Heffner was in third place at this point, so his votes were redistributed.

Heffner	Karhson	Stapleton	NO	W	Abs	AM
129	138	143	63	4	33	241
129	140	151	--	6	84	216
130	140	152	--	--	88	214
--	158	189	--	--	163	176

Thus, the next ASCIT President is Martha-Helene Stapleton

### The BoC Secretary

Last week, the BoC Secretary’s job description was unavailable. Here are some excerpts from the ASCIT bylaws about the responsibilities:

The Chairman and Secretary of the BoC conduct a preliminary investigation of BoC cases and decide whether or not a case will be brought to a hearing of the full Board.

Any records of proceedings of the BoC shall be kept by the BoC Secretary. Official minutes resulting in convictions shall be kept in a minute book o the BoC. The book is kept under lock and key by the Dean, and the Chairman and Secretary have sole power to get the minute book from the Dean.

All other records shall be destroyed by the Secretary.

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## Feature Columns

## Random Access...

by: Vikram Dendi  
randomaccess@geekguru.com

There are days when many Techers wake up in the morning (or afternoon if you are more like me) and find the nearby mountains shrouded in smog. Pollution is already one of the biggest problems in the fight for survival of the human race. I have often wondered what we as a community could do towards alleviating this problem. Caltech does have a wonderful but little known club that could very well be our means of saying thank you to nature. The Caltech Electric Vehicle Club provides its members with a way to contribute to the protection of the environment, do cool projects, and drive electric cars (albeit without power steering currently). The club needs enthusiastic members - members who would like to take part in interesting research, work on keeping the cars in good shape, and drive the cars around (it would be nice if you took part in all these activities, but it's not mandatory). You could be the co-inventor of a concept car! Bryan Tiedemann is the current president of this club. Andy Berkun is the resident Mad Scientist. Following is some information that they pro-

vided for the Caltech community about this cool club. Do read it, and be part of something exciting and good. CEVC: Interested in alternative energy transportation? Like to take things apart and put them back together again? Enjoy tinkering with new ideas, only to find that you don't have the resources? Sick of smog and want to make a difference? Join the Caltech Electric Vehicle Club today! Currently we have four electric cars, all converted gasoline models: a 1979 Honda Civic, a 1985 Ford Tempo, a 1991 Geo Metro, and a 1994 Geo Prizm. Our Civic and Tempo are in working order and available for members to drive, while the Prizm and Metro are both "works in progress." We are looking for enthusiastic new members to share our cars with. Below is a report from our Science Officer Andy Berkun summarizing the various projects the club is involved in. If you would like to join or would like more information about CEVC, email Bryan Tiedemann (tmann@its.caltech.edu).

Regenerative braking: One of the big advantages of EVs over gasoline and pedal power is that there is fundamentally the ability to transfer kinetic energy from the vehicle back into stored energy that can be used to accelerate the ve-

hicle later. This is clearly impossible with gasoline - you can't just use energy to turn smoke back into gasoline and air.

In a typical car in city traffic, about 75 percent of the energy created by the motor will end up as waste heat in the brakes. Most EVs don't do regenerative braking in any useful fashion. The Prizm and some of the AC power plant cars have a weak form of braking that is just enough to slow the car down on a long hill. We wanted to build a car that can brake strongly enough to deliver more than half its kinetic energy back into the battery pack when it stops for a red light. We have a converted Geo Metro, which is an ideal car for the experiment. It is ideal because its disk brakes are inadequate due to some poor planning in the construction of the vehicle. We replaced the Curtis controller with a bank of relays designed to switch in batteries as needed. The relays can also pass power back from the motor into the batteries. A single board computer drives the relays based on the accelerator and the brake lights. The car is nearly operational but had a transistor fail catastrophically and needs this repaired. The car should be capable of 60 horsepower of electrical braking when completed.

Battery rejuvenation: Over a year ago we received a donation of sealed lead acid EV1 batteries from GM. In that time our beloved Civic destroyed them with a subtle ther-

mal problem. I drilled holes in the tops of each cell, added DI water, and brought the battery pack back to its full capacity.

In the process, I learned how sealed batteries work, which may lead us to our dream of a sealed nickel iron battery. Nickel iron lasts 50 years in continuous service, but it is unpopular because it needs to be watered and have its electrolyte changed. Both might be mitigated if we could develop a sealed version of this battery.

Telemetry: We built and tested a single board computer and peripherals to measure current and voltage on each battery in our Paseo, as well as the motion of the car with a magnetic sensor on the back wheel. Before reinstalling the system in the Paseo, the car burned to the ground, leaving us a perfectly functional telemetry system. With a little math, the voltages, currents, and position sensor data can be turned into internal resistance, open circuit voltage, and efficiency. The first two will tell us the true state of the battery pack as we are driving, enabling us to avoid stressing batteries by deep discharge.

The last is a more interesting subject. DC motors can be very efficient but not at all speeds and power levels. We would like to know the best gear to be in at any speed and what the total energy efficiency of the system is. We get this by measuring power to the motor (voltage \* current) and comparing to accel-

eration times velocity. We can also solve for the drag on the car by this system, and small changes to the aerodynamics can be compared.

Display: If we can get a donation of a small computer such as a Palm Pilot or Pocket PC, we can convert the telemetry into a real time display for the driver. This should reduce wear on the batteries by alerting the driver to a weak cell, and increase range by telling the driver the efficiency while he or she drives.

Fuel cell: There is a long-term plan to form an alliance with a research group at Caltech to mount a fuel cell in one of our cars, probably the Civic. This would give the vehicle useable range and allow us to experiment with the latest technology in EVs.

There is research at the University of Washington to build a vehicle powered by liquid nitrogen. Liquid nitrogen holds about ten times the energy per kilogram as lead acid batteries. All battery technologies currently in use also wear out, whereas a LN2 car wouldn't necessarily wear out at all. I am currently building a LN2 powered vehicle. Anyone wishing to assist is welcome. My design will get an efficiency of about ten percent but there are ways to improve that figure.

Charger design: We have built and tested a number of chargers for the EVs with an eye for energy efficiency, long lifetime on the wet cell batteries, etc. This is an ongoing project.



## Innerspace

### THE HOUSE SYSTEM BY JASON MELTZER

I don't like to think about the Undergraduate Houses very often. I lived in Ruddock when I was a frosh (because I had to), and then I left. The system never really appealed to me. Sure, I'm still a member, and I am working to build a stack this year, but I haven't wanted to live there since I moved out. The House System never was on my top ten list of great things about Caltech. Right now, in fact, it's

about neck-and-neck with the fact that there aren't any decent late nite restaurants in the Pasadena area. Why such antipathy? That's what I'm going to talk about today.

All of the expected complaints about living in the Houses apply to me: I didn't like the rooms, the places are a bit dumpy (even for a college dorm), and the food is substandard in comparison with what else is available at Caltech. But there's more to it than that. One of the things I hated most about living in Ruddock (and this applies to most of the Houses) was the dinners. Besides the bad food and service, any semblance of an enjoyable dining experience was totally ruined by the dinner rules. Now I understand that, at least in Ruddock, the rules are designed to make people more social and encourage decent conversation. Unfortunately, the exact opposite effect seems to be created. Let me discuss a few in specific to Ruddock (and I think this applies to some Houses, too).

Let's start with the "no nerd talk at dinner" rule. Come on... how ridiculous is this? Fact is, most students at Caltech are nerds, and nerds talk about nerdy things. To deny them the pleasure of conversing about topics that they enjoy and find interesting is like disallowing the serving of dessert because it's bad for their health. And what exactly constitutes "nerd talk"? Classes? Certainly, but what about buying more RAM for one's computer? Is that nerd talk? How about discussing the President's policy on Internet regulation? Or what internships one is applying to that summer? Does any conversation on a level more advanced than George W. chatting with Cocoa the signing chimp about his favorite brand of trail mix fall under the dreaded "nerd talk" rule? The problem with this rule is that it disallows virtually all topics of conversation that Techers can discuss intelligently, thus lowering the dialog at dinner to childish jokes and chewing noises.

"No reading at dinner." How silly is this? Yes, someone who brings a book, homework, or some other form of reading material to dinner is probably not going to be the most talkative person. So what? Who does it hurt if someone wants to read at dinner? Sure, it's rude, but since when has politeness been a virtue of the Houses? And don't say "it's for their own good that they're not allowed to read at dinner," because that's a load of bull. If someone is feeling antisocial enough to want to read instead of participating in the utterly stimulating conversation available to them at a

House dinner, then disallowing them that choice simply hurts them and helps nobody. Do you really think that person will be very engaging to talk to that night without his book? Hell no; he'll just be pissed that he can't have it. Let the man read.

This one's my favorite: "No speaking foreign languages at dinner." Not only is this a ridiculously disgusting display of xenophobia and closed-mindedness, but it also opens the door to discrimination lawsuits! Forgetting about the law, on principle alone I think it's a terrible thing to restrict someone's freedom in this manner in the very place they are supposed to feel most comfortable — where they live. The fact is, not everyone is a native speaker of English. It's true that everyone at Caltech knows how to speak the language (sometimes poorly), but not everyone is comfortable with it. Defenders of the "English only" rule say that it's exclusionary when people at a House dinner speak a different language with their buddies; it keeps others out of their conversation by default. Who cares? Is it so important that you have the option to involve yourself in everyone's conversation that you need to restrict another's freedoms? Before you get all high and self-righteous, saying that if foreigners want to live in this country they should speak only English, imagine yourself in their place. Imagine yourself in a non-English speaking country, living at a university where everyone speaks a different language. If you found a group of Americans to be friends with, wouldn't you sit around and

speak English all the time with them, especially when you're relaxing and eating dinner? Of course you would! And if your hosts decided to pass a rule disallowing you the right to speak English at dinner, you'd be the first one on the phone whining to the American Embassy that your rights as an American citizen are being trampled upon in this foreign land. Get over the jingoist self-important bullshit and let people speak whatever damn language they please at dinner. Not only is it their right in this country, it's the right thing to do.

Setting aside dinners, the other thing that gets me about the House system is the childishness it seems to promote. I know that some people like this, but sometimes it goes too far, and the system encourages it. One example is the oft-discussed BFD. The administration has had it's hands full with this one, and for good reason. I haven't read the BFD lately, but I've been told by many that it's tamer now than when I was a frosh, and some people in the House lament this. Before you start longing for the good old days, just remember that they weren't always so good. I can remember when the BFD was so personally insulting that it caused targeted individuals great emotional distress, sometimes leading them to leave the House ASAP. It's one thing to poke fun at people's ideas (I do it all the time in this column), or to personally insult those who willingly agree to participate in the game, but it's a totally different matter when those targeted

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# Ticket Stub

## The Ticket Stub

by Justin Ho

### Chocolat (C+)

I shudder at the thought of a world that hadn't been introduced to chocolate. It's such a staple food, of which I am a very big fan, and I can barely imagine a time when children greeted their headmasters without bellies full of Cocoa Puffs or Nestle Quick. But while there is a sense of relief that chocolate has become so pervasive and satisfying, perhaps it has lost a lot of its seductive power, which primitive consumers would have encountered. That said, *Chocolat's* flight into the ability of chocolate to unlock temptations of the soul may appear difficult to swallow for an audience which has gorged itself on more than one chocolate cake.

A battle begins in a small, pious French town one blustery, wintry day when a mysterious woman and her young daughter become the new occupants of a neglected pastry shop. It's a quaint little town, perched atop a promontory above a river that hums with life, nurturing fecund pasturelands on its edges. The landscape is so picturesque, and possibly synthetic in fact, that it feels like an escape into a vintage Dutch painting. But for all the town's beauty, its inhabitants emanate an austere, suffocating restraint of Puritanical proportions. Their eyes gaze adoringly at the single mother, Vianne (the resplendent and intriguing Juliette Binoche) and her daughter, Anouk, whose sunny dispositions and pretty garments strike a chord of idiosyncrasy in the conservative stone town. But to speak to them or of them in a tone any more welcoming than with the basest civility incurs the wrath of the Seigneur Comte de Reynaud. There is conservatism at stake, and centuries of religious piety to honor. The deviants, while welcome to remain, can nevertheless be swayed by coercion, and Vianne and Anouk make no secret of their pagan sensuality or abstinence from religious institution attendance. As the cobweb-infested former pastry shop metamorphoses into an enchanting chocolaterie, the Seigneurs rancor simmers like vitriol. He governs by example, and his sheep should follow accordingly, joyless and undistracted by objects appealing to temptation. Certainly, most of the inhabitants have a propensity to do so. Because of its bleak seclusion, it's tempting to remind them that it's been more than a decade since the end of Nazi occupation, or perhaps that it's nice to stop reminiscing about zealous persecution of the Huguenots.

Viannes' liberal message of enjoying here-on-Earth does not fall on deaf ears. Her chocolates are bewitching for the few souls willing to indulge, inspiring passion in

a fading marriage, giving the elderly a reason to believe in love after love, and giving a battered wife the feistiness to leave her abusive husband. Such dynamism is inspired that the Seigneur takes an active part in scripting the pastor's sermon to address the dangers of changing times, and to reiterate the tenets of a stern religious practice that condemns human temptation too indiscriminately, and excludes the humane in order to include only God-fearing perfection. The battle lines are thus drawn, and the acolytes assemble accordingly, with the chocolate-appreciators having more fun, of course. But even as the Seigneur is portrayed as a middle-aged curmudgeon, so good that he ironically takes the role of the antagonist, his actions only delineate good intentions. Slowly at first, and then in a deluge, he explores his humanity and God's capacity to forgive his creatures for their weaknesses.

The film, artfully performed and delicate, comes across as serious and droll at different times, but one walks away with a feeling of its insignificance. The type of experimentation portrayed in the movie can quickly give way to over-indulgence, surfeit, and jadedness so that one would continue to seek another inspiring novelty. Indeed, anyone who looks at chocolate as the same tasty treat after the movie and nothing more will feel that effect of a mystery dissolved. The virtues of chocolate as exulted in this film will lose their appeal and give way to a crash. Better then to keep things at a distance and retain that element of intrigue. But this message is not synonymous with complete abstinence from things delightful. The best remedy for not looking for grass that's greener is never to be bored, and to seek solace and peace by self-constructed means rather than external devices, an understated theme which gets occluded by Viannes' mission of spreading chocolate for the sake of indulging those repressed temptations. The townspeople learn to be happy, but they should be blamed somewhat for their self-constructed prisons, which cloud not only their own lives with misery but make them prejudiced and sarcastic toward strangers whose lives are more carefree. With chocolate, they come achingly close to American Beauty's Lester Burnham, depending on chemical means to escape from their sadness. Vianne's catharsis, as evidenced by the end of her nomadic tendencies, comes about because she has found a place she understands and is understood. It's a good message that comes a bit late and amidst less noble and more ambiguous themes that ingratiate to popular taste.

### Traffic (A)

Fast forward 40 years, cross an ocean, and see the result of the indulgent philosophies broached in *Chocolat*—except the cure-all for boredom takes the form of much darker, more destructive substances than chocolate. The looming cautious religious institutions are wan-

ing, their messages for restraint are not wanted now, and the government is stuck fighting institutionalized corruption and greed without curbing the omnipresent human desire for taking the edge off. One of the main characters defends his practice of a nightly dose of Scotch, claiming that "Otherwise, I'd be dying of boredom," and it is a message that teeters close to his daughters "Why not?" rhetoric for consuming free-base cocaine. As the father ascends to the position of drug czar, there's a tone of hypocrisy in his diatribe against drug use, and an unnerving question of where the line is drawn in the spectrum of addictions. On a grander scale, the film holds a mirror up to the tragedy of a posterity in which youth are steeped in ennui, lethargy, and aimlessness because all of the battles have been fought and won, and life poses no challenges worthy of the thrill-seeker's attention. It's a costly price that the government must pay for a moral fabric fading at its edges, the denervating drug war.

Traffic is a blistering epic that chronicles the vertical integration of the drug society. Attempt to pinpoint a reason why the drug trade is so organized, so massive and yet so covert and you'll find yourself in the same position as the Washington bureaucrats, scratching your heads and at a loss for any new ideas to curb the phenomenon. The drug society is so pervasive, so capable of crossing borders, transcending language barriers, and disintegrating filial ties. It is with awareness of the vastness of the drug trade that the film focuses not on a single story, but on three pulsating dramas, each capable of providing the material for its individual cinematic masterpiece. To account for the limited screen time, the narrative cuts violently from one storyline to another, probing the psyche, the addictions, and the power struggles amongst its characters, inextricably linked at different points along the drug pipe from sultry Mexican desert to ice-blue suburban melancholy.

The action begins near the Mexico-U.S. border, where an honest border control cop, Javier Rodriguez (slick-chic Benicio del Toro) and his partner do their small part in stopping suspicious vehicles en route to smuggling another shipment. Javier is street savvy and intelligent, yet even he is disenchanted with the miniscule impact he can make on the large volume of trafficking. He is able to solve problems by exploiting human weaknesses, and to look beyond illusions, especially government officials who are too enthusiastic about stopping the drug war to be sincere in the midst of pervasive corruption. Against the hierarchy of a drug-induced shadow government, Javier is ever at a loss.

His equivalent north of the border is Robert Wakefield (a torn Michael Douglas), an Ohio Supreme Court justice promoted to the position of the new U.S. drug czar in light of his rather unforgiving sentences. Wakefield rises to the position with alacrity, a novice

to the chummy Washington political demimonde, but quickly realizes a futile battle. The government is out-matched financially by third-world drug cartels, and the cocaine, having found a niche among the down-trodden, the power-hungry, and the experimentalists, has a very powerful protective mechanism called the law of supply and demand. No nuances in drug policy can undermine this synergy, especially as many of enemies who would be the targets of new actions lie unseen, or too close for comfort. With infuriating impotence, Wakefield learns that his own over-achieving, prep-school attending daughter is a source of the problem. A victim of suburban boredom and parental apathy, she makes a whirlwind descent into drug abuse and disconnection. Any attempts to discipline her only drive her closer to becoming an unredeemable, amoral crack whore, a somewhat non-respectable and scathingly ironic role for the daughter of a drug czar.

The path between border smuggler and suburban insecurity is filled with people like Carlos Ayala and lesser dealers, the middle-man drug barons obliging enough to broker trades with ruthless drug cartels and savvy enough to develop puppet businesses to elude, at least for the time being, the scrutiny of law enforcement. Snitches arise, and drug barons are replaced, but by a successor even more ruthless and unforgiving than the former to eradicate any temptations of mutiny. To accentuate this succession, an extra punch is provided when a young wife takes the reins. She is naive and amateur at first, but desperate and fiercely protective the next. Early in the film, a lesser drug baron, Eduardo Ruiz, is caught by two undercover DEA agents and coerced into breaking the silence about bigger honchos in the network. The informant's testimony leads to the arrest of Carlos Ayala, whose pregnant wife, Helena (Catherine Zeta-Jones), reels with disbelief, discovering that her posh lifestyle is illegitimate, and that a father so protective of his son would control the flow of contraband substances into someone else's child. It is a disgrace, but having been shunned from the elite social circles and given the suspicious eye already, she salvages the family's finances by descending into the underworld, conspiring out of necessity to preserve her lifestyle. She organizes the exchange of a devious device in which to smuggle cocaine, imperceptible to canines and innocuous to the human eye, and orders the execution of the witness in an evocation of heinous familial loyalty that is Godfather-esque. It is the euphoria associated with drugs that corrupts even the most innocent and gives the trade its seductive power. For some, it leaves a hollow shell of a moral somebody, and for the other side it builds noble, but tragic, heroes.

Since the opening of this film, a lot of dialogue has surfaced about the misguided drug war that has precipitated the highest incarceration

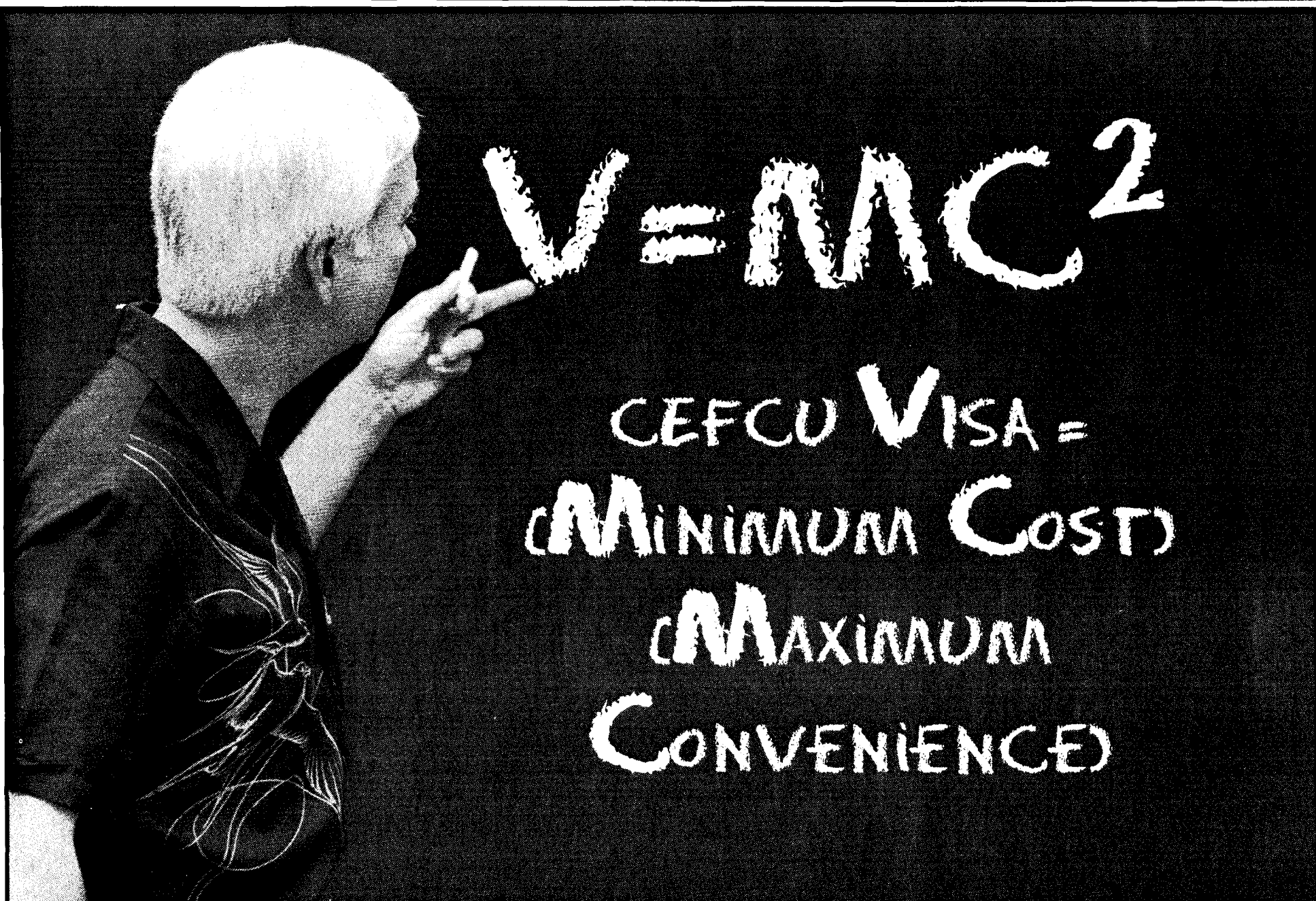
rates in the free world, many for non-violent crimes. It is a rash conclusion to state, however, that the film encourages the cessation of the government's role in fighting this vice. Rather, the film remains noncommittal. It's hard to imagine what society would be like if little Timmy could get his hands on a crack pipe freely and without parental discretion because drugs were suddenly legalized. The film documents quite clearly the role that family and community have to play to preclude any temptation to begin with, lest one develop the degrading yearning which makes people bitter as in *Chocolat*. But regardless of where one stands on the drug issue, it's important to shun idleness as the brain can make the body do stupid things without adequate stimulation. With that in mind, indulge in this movie for the sake of awakening a moral center, or to believe once again that movies really can have social significance and cathartic relevance.

## INNERSPACE:

CONTINUED FROM PAGE 3

want to be uninvolved and the attacks are of a personal nature. Some people apparently need to learn the difference between a joke and an insult. One should not become the target of public ridicule just because someone in the House doesn't like them. There's plenty of opportunity to badmouth people behind their backs; it's not necessary to do it in print. I'm not saying this happened all the time, but there were instances of this behavior that went way too far, and I am happy that the BFD is more tame than in the past, both because it will cease to get the House into trouble and it will no longer distress those who wish to be uninvolved in this kind of childishness.

In looking at all of these gripes of mine, I think the unifying problem is the fact that participating in the House system is not voluntary. A good percentage of those who live in the Houses are forced to live there. This changes the rules of the game. If these were normal fraternities, there would be far more leeway because participants enter willingly and of their own accord. They want to be involved in that type of culture. At Caltech, on the other hand, all freshmen must live in one of the seven Houses, except in very special circumstances. This means that there will be individuals there who don't like the culture, who don't care for some of the garbage that goes with it, and who just want to be left alone. All the topics I discussed in this article violate the wishes and rights of those people. The purpose of this housing system we have is to give students a break from their classes and work and to let them relax in their own way. It is not to make some individuals feel like outcasts. When thinking about the rules, traditions, and activities that your House imposes on its members, think about the people who don't want to live there but have to and who don't want to be bothered. Leave them alone!



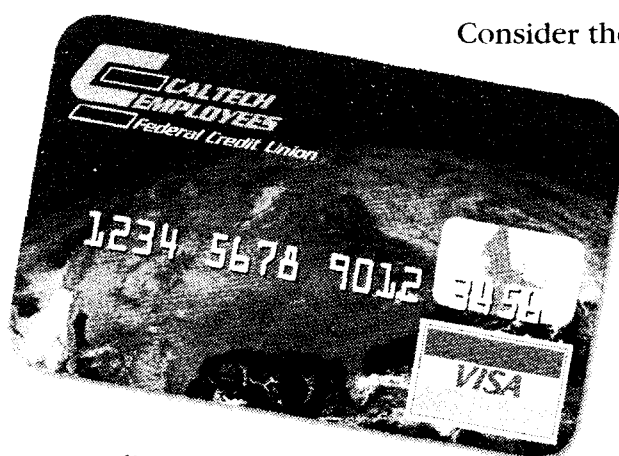
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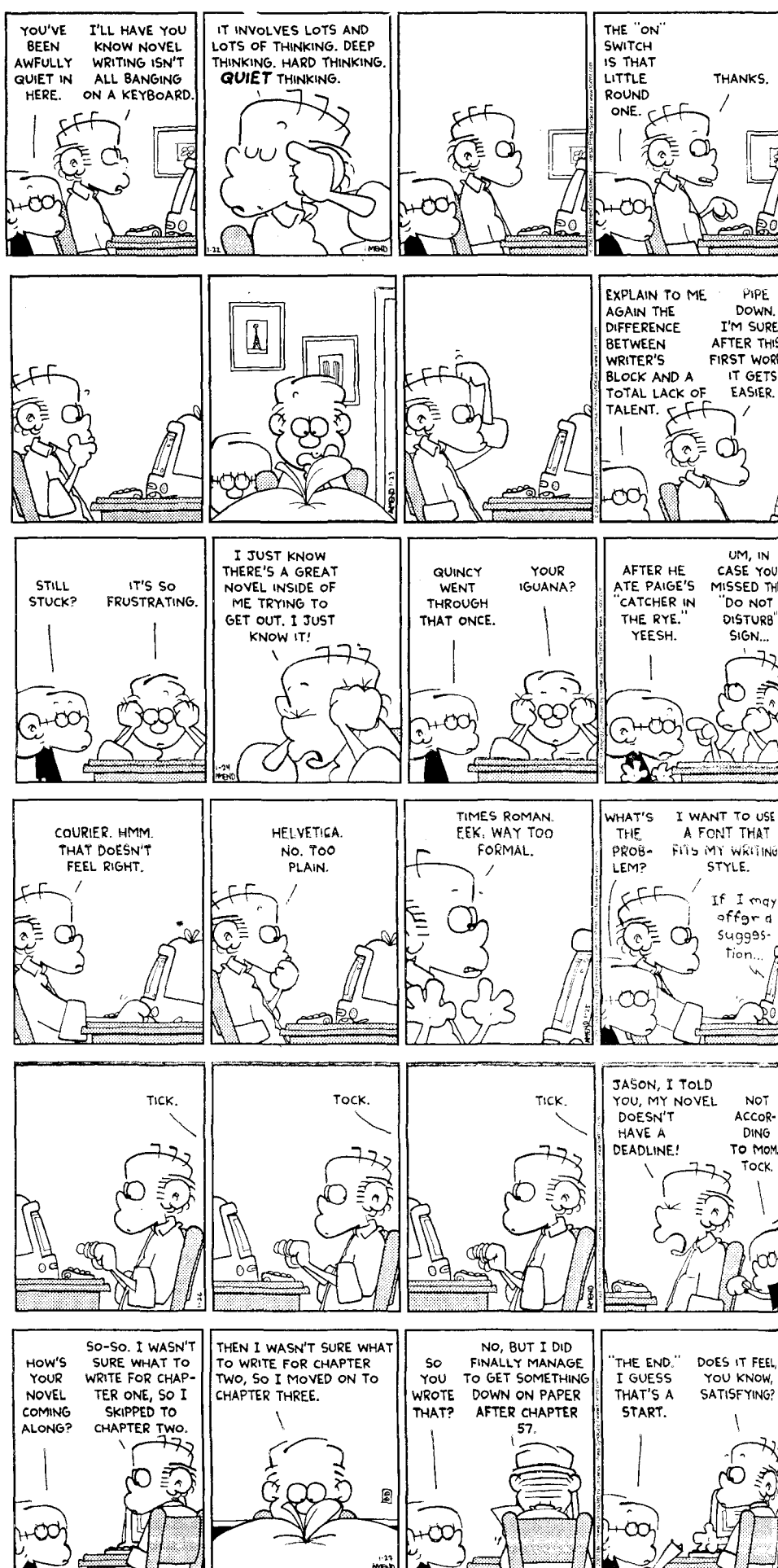
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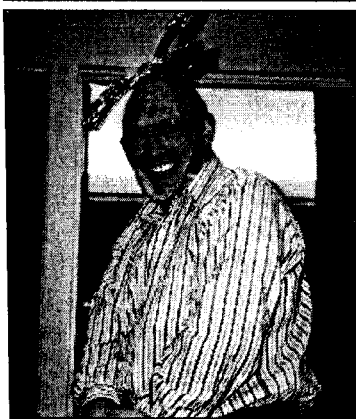
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# The Dean's Corner



## Dean's Corner

### What a Card!

by Jean-Paul Revel

ourselves to be a nation governed by laws. That means respecting legal decisions that we personally disagree with.

When the results of an election are as close as they were in Florida, with the margin separating the candidates no greater than the noise, there are better ways to handle the situation than to count and recount. The error rate can never be zero. Some errors will be corrected but others will creep in. The will of the people will ever be inscrutable. In some instances it would be reasonable to determine the error rate experimentally, and then correct the count accordingly. Of course, considering that legislators recently opposed such an approach to increase the accuracy of the census, it is unlikely they would approve of it in an election. Also, correcting for the error rate would not help much in choosing between two candidates. Votes for both would end up being

corrected by the same factor.

Perhaps a second round of voting would be more effective in breaking the tie. More people than usual (so few of us vote!) would be energized to express their opinions. There would be a strong feeling that one's vote would be meaningful and greater participation would hopefully lead to clearer results.

Not all of the errors are miscounts of the votes. In the last election it seems that many of the problems had to do with ambiguous ballots and/or wrongly cast ballots. There could not have been that many Buchanan supporters—or could there have? There have been suggestions that we should follow the example of Brazil, where touch screens are supposed to have successfully overcome such problems. While that would cure problems having to do with incompletely removed, dimpled or pregnant chads, I imagine new sets of difficulties. For one thing it is difficult to be 100 percent sure that an electronically recorded vote does not

get tampered with.

A punch card represents a reasonably tamper proof medium for recording the votes. One could devise a card holder with a built in rotating brush to wipe the back of the card, thus dislodging extraneous pieces of cardboard. A positive punching mechanism might also help in making sure that the holes in the card are properly formed. Florida-type difficulties could be further minimized by giving the voters immediate feedback on what or whom they are about to select, before the card is actually perforated. The chosen candidate's name would appear on a screen. If there has been an error, a correction could be made right on the spot. This would also work well to record votes for or against a particular proposition. Of course it is possible that everyone will now be leery of punch cards, relics of the past that they represent.

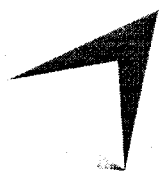
So maybe one could replace cards with a modern equivalent. Something similar to a modern subway ticket, for example. I don't know how things are set up in the Los Angeles subway system, but metros in Washington and in London (other places too) use tickets with a magnetic stripe.

The stored information is read on the fly as you cross the gates to get access to the platforms. Woe to those who oversleep and miss their exits, the way out is automatically blocked. A voter could make sure that the ticket correctly recorded his or her intentions before turning it in to the polling officials. One danger might be that votes could be lost if the tickets were exposed to a strong magnetic field. Then instead of a magnetic stripe, the vote recording device could prepare a bar code encoding the wishes of the elector.

Any system would be further improved if there were some uniformity across the whole country. Each state is very jealous of its independence and prerogatives. But national elections should be administered uniformly rather than stay at the whimsy of individual states. A good thing that Caltech and MIT are joining ranks to resolve the problem.

A bientot,

*Jean Paul Revel*



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## Mints

## ANNOUNCEMENTS

**H&SS Division** offers the following Selected Topic and New Course for winter term 2000.

**Law 133 Business Law and Economics** This course provides an introduction to modern business organizations, from both the legal and social-scientific points of view. First we will examine the basic principal-agent relationship at the core of all organizations, from both a legal and economic stand point. We will then explore the governance of modern organizations, both public and closely held.

Topics covered will include corporate liability for employees' wrongdoing, managers' fiduciary duties, corporate opportunity, shareholder voting, shareholder suits, proxy contests, mergers and acquisitions, and a brief introduction to securities fraud.

The course may be taken more than once if the topics differ. Instructor: Arlen TTh 1:30-3pm BLH

**SES/PI 133 Philosophy of Physics** In this course, we will examine conceptual issues that arise within classical (i.e. non-relativistic) quantum mechanics. The mathematical formalism of quantum mechanics is well understood, and its predictions well-confirmed. There remains, however, the beguiling question of how the world could possibly be that way. In particular, we will examine two problems. 1) The standard formalism for quantum mechanics includes two different rules for the evolution of a physical system. One rule applies when the system is not being measured, the other when the system is being measured. This raises two fundamental questions: what is measurement, and why should a system behave differently when it is being measured? 2) In certain types of physical system, distant particles can coordinate with each other across a great distance -- so great that any signal sent from one to the other would have to travel faster than the speed of light. How is this coordination possible? A number of incautious thinkers have drawn outrageous conclusions from these features of quantum mechanics: quantum mechanics proves that we have free will, or that all things in the universe are interconnected, or that ESP is possible. Instructor: Hitchcock - W7pm 127 Bax

The Caltech Y is coordinating Make A Difference Day on April 7th (the first Saturday of 3rd term). We are currently organizing several community service projects including helping the homeless, tutoring children, caring for animals, and cleaning up the environment. At the end of the day, everyone can attend a

BBQ at the Y. Contact Kristin Abbott, (kabbott@its)

**Gay/Lesbian/Bisexual Discussion Group:** Looking for a safe and supportive place to discuss issue such as coming out, being out, dealing with family, coping with a homophobic culture, and being GLB at Caltech? Want somewhere just to make new friends? We invite you to the Gay/Lesbian/Bisexual Discussion Group, which meets on the first and third Tuesdays of each month from 8:15 until 10:15pm in the Health Center Lounge. This is a confidential meeting and does not imply anything about a person's sexual orientation - only that s/he is willing to be supportive in this setting. If you would like more information, please call ext. 8331

**Community Service Opportunities Abound!** The Caltech Y offers students and staff a variety of ways to participate in community service. Opportunities include working with Habitat for Humanity, Union Station Homeless Shelter, math tutoring (on or off campus), reading tutoring, and working at local hospitals. One-time community service events are planned each term and opportunities for service on a regular basis exist. Undergraduates with federal work-study can receive \$15/hr for their community service work. Contact Kristin Abbott at kabbott@caltech.edu or call 626/395-3180.

**Paid Summer Internship in Silicon Valley** Free room and board, \$1000 spending money for 8 weeks, paid for weekend trips, up to \$5000 for eight weeks of experience with a Silicon Valley startup. Check out [www.uofdreams.com](http://www.uofdreams.com) and if you have any other questions email [melly@its.caltech.edu](mailto:melly@its.caltech.edu).

## EVENTS

**A sculptural installation by Los Angeles artist Eric Wesley** will be held on February 3 at 5 p.m. at the Caltech Outdoor Art Space, located behind the Campus Recycling Center on Holliston Avenue. The work will be on view through March 31.

**Science, Ethics, and Public Policy LECTURE SERIES Winter Quarter 2000:**

Dr. Ute Deichmann, Genetics Institute, University of Cologne will discuss The Slow Start of Molecular Biology in Post World War II Germany: The Impact of the National Socialist Science Policy. Thursday, February 1, 2001 4:00 p.m. Room 25 Baxter Building

Dr. David Rowe, Professor of History of Science and Mathematics, Mainz University, Senior Fellow, Dibner Institute will discuss Einstein's Enemies: German Antirelativists, 1914-1920. Thursday, February 15, 2001 4:00 p.m. Room 25 Baxter

Building

Dr. John D. Norton, Professor of History and Philosophy of Science, University of Pittsburgh will discuss Einstein and the Canon of Mathematical Simplicity. Thursday, March 8, 2001 4:00 p.m. Room 25 Baxter Building

**The Caltech Ballroom Dance Club** presents a Professionally Taught Beginners' American Foxtrot dance class. This is a 5-week series held on the Caltech campus in Winnett Lounge from 7:30-9:30pm, with practice continuing until 9:30pm on five successive Wednesdays: Jan 17, 24, 31, Feb 7. The cost for the series is, \$30.00 for the five lessons, single lessons are \$7.00 [\$20.00 and \$5.00 respectively for undergraduates]

**SEMINAR ON SCIENCE, ETHICS, AND PUBLIC POLICY** features Dr. Ute Deichmann from the Genetics Institute University of Cologne

The Slow Start of Molecular Biology in Post World War II Germany: The Impact of the National Socialist Science Policy Judy Library, Baxter Building Thursday, February 1, 2001 4:00 PM

**SAVE THE DATE!** Prefrosh Weekend is coming up! Thursday, April 19th - Sunday, April 22nd, 2001 If you have any questions, please email Dina Figueroa - [dina@admissions.caltech.edu](mailto:dina@admissions.caltech.edu)

## SCHOLARSHIPS

The Financial Aid Office has applications and/or information on the following as well as additional undergraduate scholarships. All qualified students are encouraged to apply. Our office is located at 355 S. Holliston, second floor.

**The Korean American Scholarship Foundation (KASF)** is accepting applications for scholarship awards ranging from \$1,000 to \$5,000. Applicants must be full-time students of Korean American heritage enrolled in at least their second year of college, graduate school or professional school in the Western Region. To apply, applicants must submit application form, official academic transcript, two letters of recommendation, one picture of applicant taken within the last year, and a

copy of the student's and parent's or guardian's Federal Income Tax returns of last year. Applications are available upon written request by writing to Scholarship Committee, KASF Western Region, 3435 Wilshire Boulevard, Suite #2450, Los Angeles, CA 90010 or via the web at [www.ksaf.org](http://www.ksaf.org). Entries must be submitted to KASF by January 31, 2001.

**The National Academy for Nuclear Training** is offering \$2,500 scholarships to eligible students majoring in nuclear engineering, power generation health physics, electrical or mechanical engineering, or chemical engineering with nuclear or power option. Applicants must be U.S. Citizens, enrolled full-time in a four-year accredited institution, minimum GPA of 3.0 or higher, and interested in nuclear power careers. Additionally, scholarships will be renewed for current Academy scholars who maintain their eligibility. For further information on the National Academy Educational Assistance programs, please visit [www.nei.org](http://www.nei.org). Applications are available in the Financial Aid Office. Please send completed application materials to: National Academy for Nuclear Training, Scholarship Review Committee, P.O. Box 6302, Princeton, NJ 08541-6302. Entries must be submitted to the National Academy for Nuclear Training by February 1, 2001.

**The College Women's Club of Pasadena Scholarship Foundation** is accepting application for scholarship and fellowship awards for the 2001-2002 academic year. Applicants must be female, U.S. Citizens, full-time undergraduate and graduate students, sophomore or above, and must have a 3.0 or higher GPA. To apply, applicants must submit an application form, a one-page, typed essay, official academic transcript, and three letters of recommendation from professors familiar with the student's aspirations and achievements. Applications are available in the Financial Aid Office. Entries must be submitted to the Financial Aid Office by February 9, 2001.

**The American Society of Naval Engineers** sponsors a scholarship program to encourage students to enter the field of

naval engineering and to provide support to naval engineers seeking advanced education in the field. Programs of study which apply to the diverse field of naval engineering include architecture, marine, mechanical, civil, aeronautical, electrical and electronic engineering, and the physical sciences. Scholarship awards of \$2,500 for undergraduate students and \$3,500 for graduate students will be made for the 2001-2002 academic year. The candidate must be a U.S. citizen and demonstrate a genuine interest in a career in naval engineering. The scholarships apply only to the last year of a full-time or co-op undergraduate program or to one year of graduate study leading to a designated degree in an accredited college or university. Starting this year, graduate student candidates must be ASNE members. They may join ASNE when applying. The deadline for receipt of scholarship applications is February 15, 2001. Call (703)836-6727 if you have any questions about this program.

**The American Electroplaters and Surface Finishers Society (AESF)** is offering scholarships to upper class undergraduate and graduate students who are interested in careers in the surface finishing field. Applicants must be full-time and majoring in chemistry, chemical engineering, environmental engineering, materials engineering, materials science, metallurgy, or metallurgical engineering. To apply, applicants must submit an application form, statement describing career objectives, list of educational achievements, official transcripts, and three letters of recommendation from teachers, employers, or professors. Applications are available in the Financial Aid Office. Entries must be submitted to the AESF Scholarship Committee by April 15, 2001.

To submit an event for the Mints, contact [mints@ugcs.caltech.edu](mailto:mints@ugcs.caltech.edu) or mail your announcement to Caltech 40-58 Attn: Mints. Submissions should be brief and concise. Email is preferred. The editors reserve the right to edit and abridge all material. Deadline is noon Wednesday. Unless specified, all mints will run for two weeks.

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